

Nebraska

Large Area Mapping Initiative

Nebraska Department of Natural Resources

Introduction

The Nebraska Large Area Mapping Initiative



The Nebraska Department of Natural Resources (NDNR) has developed a process for using a geographic information system (GIS) to map Approximate Zone A (1% probability) floodplains of large rural unmapped areas in Nebraska. Called the *Large Area Mapping Initiative* (LAMI), the system tries to maximize both the productivity of the mapping team and at the same time the utility of the final product. The premise of the program cannot be defined by a single computer program or calculation method, but is instead based on the idea that there will be outstanding results when an organization is flexible enough to use any appropriate technology to put the right tool in the hands of a mapping professional. Currently, the Nebraska floodplain mapping team is delineating the 100-year floodplain at a rate of approximately 5 stream miles delineated per hour while at the same time producing most of the information necessary for the creation of the Federal Emergency Management Agency's (FEMA's) Approximate Zone A Digital-Flood Insurance Rate Map (D-FIRM) product.



This process has been coordinated with FEMA. NDNR is receiving funding from FEMA under the Cooperating Technical Partners (CTP) program to map Nebraska counties. (For additional information regarding CTP, please visit the FEMA website at:

http://www.fema.gov/mit/tsd/ctp_main.htm.)

The final mapping product complies with FEMA's *Specifications and Guidelines for Flood Hazard Mapping Partners*, and the data is compliant with the DFIRM database requirements.

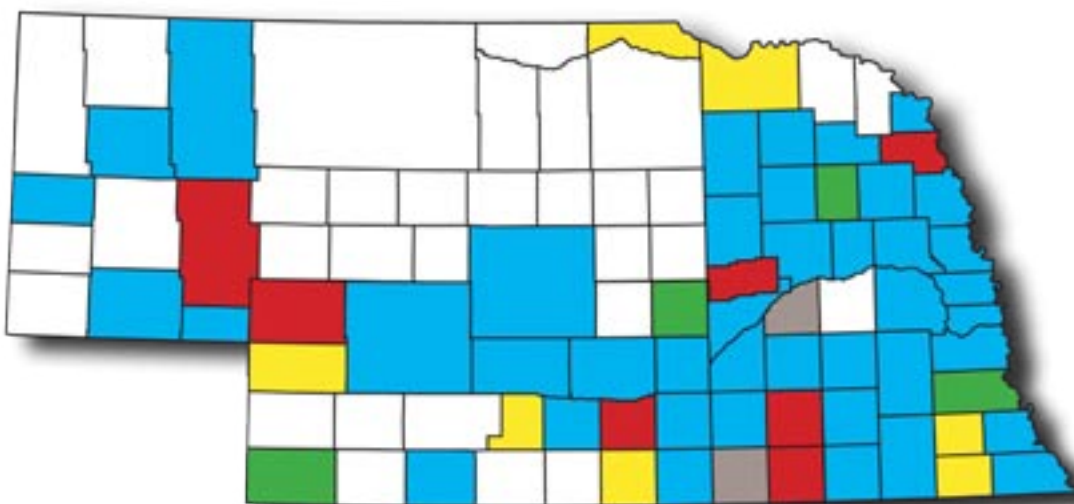
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FIRM Status in Nebraska

The following map shows

Flood Insurance Rate Map Panels that were current in 1998, as well as panels for counties that have been recently mapped. Note that many of the countywide FIRMs are incomplete, and 31 Nebraska counties have no floodplain mapping at all, and are not currently contracted for mapping.



LEGEND

■	2000 - 2001 CTP Counties	■	Miscellaneous Recent Counties
■	2001 - 2002 CTP Counties	■	1998 Floodplain Panels
■	2002 - 2003 CTP Counties	■	Nebraska Counties

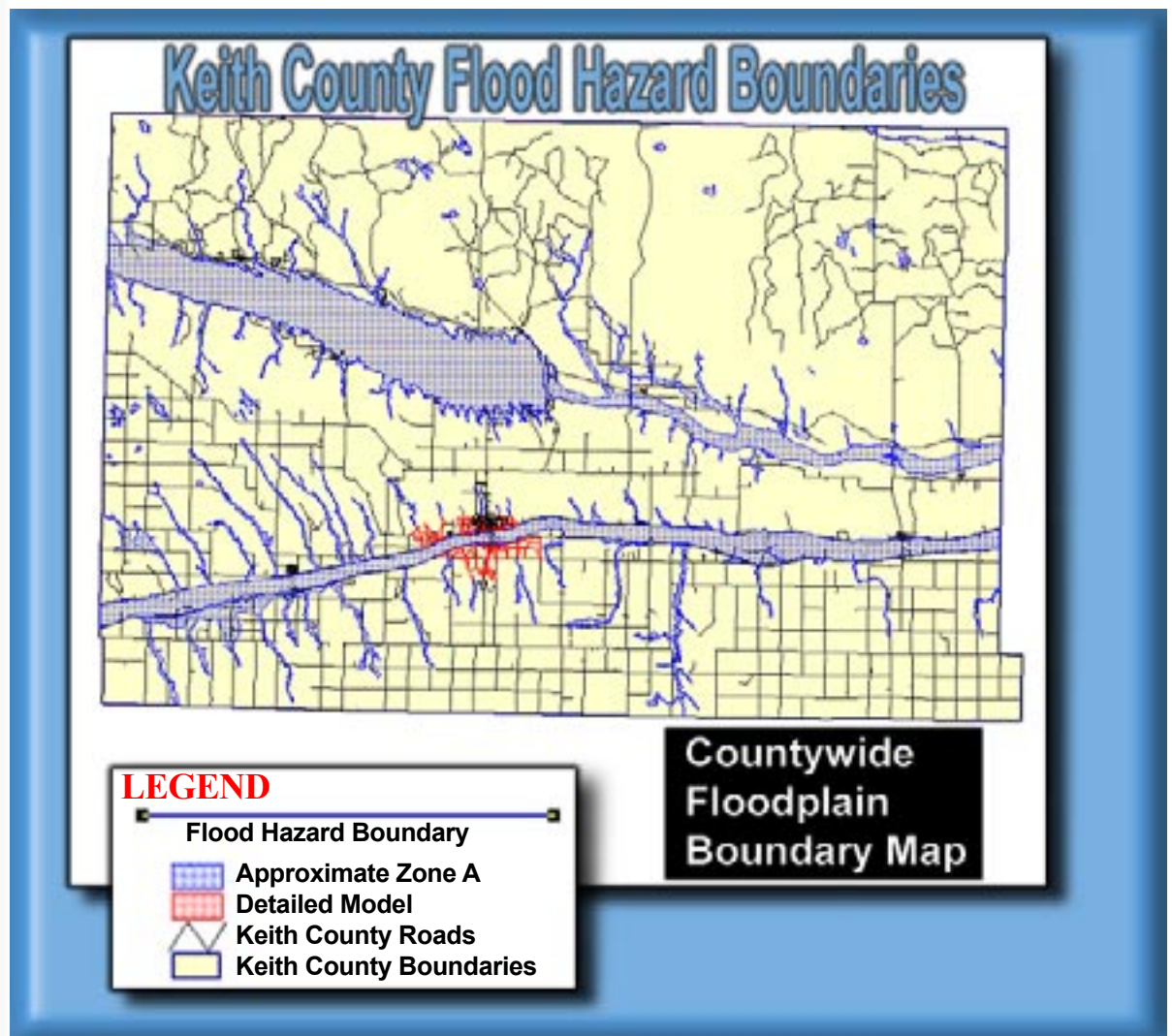
Counties that have been mapped as part of the **Large Area Mapping Initiative** include:

ITEM	Counties
Miscellaneous	Nuckolls County was mapped as a pilot study. Polk County is being mapped by the US Army Corps of Engineers using similar methods.
2000 - 2001	Dundy, Howard, Otoe, and Stanton Counties
2001 - 2002	Fillmore, Garden, Kearney, Keith, Nance, Thayer, and Thurston Counties
2002 - 2003	Boyd, Franklin, Gosper, Johnson, Knox, Pawnee, and Perkins Counties

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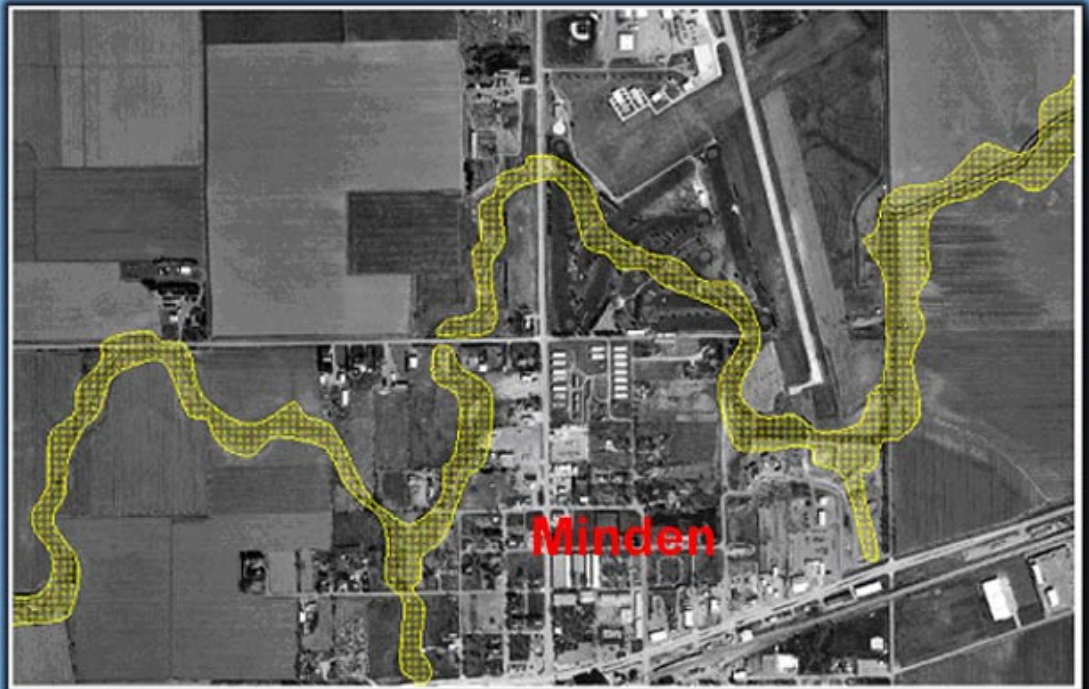
The following map shows an example of a **countywide floodplain boundary map**. The flood zone map is in an electronic format, and may be shown against aerial photographs or topographic maps, or shown against other features. In this case, the draft flood boundary map for Keith County is shown against a road map for the county.



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For most purposes, plotting against an aerial photograph gives the best result. The following figure shows a portion of Minden, Nebraska, with the **draft flood zone plotted on an aerial photograph**. For areas farther from town, section lines and/or numbers are commonly plotted on the maps for orientation purposes.



Flood Zone Example

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Mapping Priorities



For more than 35 years, the Nebraska State Legislature has given NDNR (and its predecessor agency, the Natural Resources Commission) the responsibility of coordinating all aspects of floodplain management within the state. As part of that floodplain management coordination, NDNR

has been responsible for mapping floodplains and coordinating mapping efforts in regions where floodplain maps are not adequate. The Legislature provided the following criteria for assessing floodplain-mapping needs:

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- 1.** Potential for future development
 - 2.** Potential for flood damage or loss of life
 - 3.** Probability that adequate data and maps will be prepared within a reasonable time by other sources
 - 4.** Availability and adequacy of any existing maps
 - 5.** Availability of flood data and other information necessary to produce adequate maps
 - 6.** Degree of interest shown by the local governments in the area in utilizing flood data and maps in an effective floodplain management program
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NDNR will continue to map flood hazards in Nebraska based on priorities generated from these six criteria. **Every Nebraska county is expected to have a countywide floodplain map by 2007.** At that time, mapping efforts will be turned toward remapping counties that have inadequate maps, based on the same criteria.